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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,950	09/22/2003	Shinji Takayanagi	14470.0013US01	1224
23552	7590	06/24/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ILAN, RUTH	
			ART UNIT	PAPER NUMBER
			3616	
DATE MAILED: 06/24/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,950	TAKAYANAGI ET AL.	
	Examiner	Art Unit	
	Joseph Rocca	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 3-6, 10-13 is/are allowed.
- 6) ☒ Claim(s) 1-2-7-9, 14 is/are rejected.
- 7) ☐ Claim(s) 3-6, 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

f

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Duphily (U.S. 4,470,611).

With respect to claim 1, Duphily teaches a suspension system, the suspension system comprising: right and left suspension arms (Figure 2, Element 106), each suspension arm coupled to a frame of the vehicle (Col. 2, Lines 55-65) and a wheel of the vehicle (Col. 2, Lines 55-62), the suspension arms being coupled to the frame so that the suspension arms are capable of independent movement (Col. 2, Lines 61-65); right and left linking mechanisms (Figure 2, Elements 122 and 128), each linking mechanism being coupled to the respective suspension arm (Figure 2, Element 106); a shock absorber with two ends (Figure 2, Element 112), one end of the shock absorber being coupled via the respective linking mechanism to the right arm and the other end of the shock absorber being coupled via the respective linking mechanism to the left arm (Col. 2, Lines 66-68 – Col. 3, Lines 1-2); and a swinging mechanism (Figure 2, Element 132), the swinging mechanism being coupled to the right and left linking mechanisms and to the frame of the vehicle, the swinging mechanism being configured

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to provide a damping force to restrict rotation of frame of the vehicle (Figure 2, Elements 106, 108, 112, 122, 124, 128).

With respect to claim 2; Duphily teaches the suspension system according to claim 1, wherein the linking mechanisms comprise: right and left linking arms, respectively; and right and left bell cranks (Figure 2, Element 128), respectively, wherein each bell crank is coupled to an end of the shock absorber (Col. 2, Lines 66-68 – Col. 3, Lines 1-2), the respective linking arm (Col. 3, Lines 3-6), and to the swinging mechanism (Figure 2, Element 132).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aregger (U.S. 6,276,480) in view of Parsons (U.S. 3,598,385).

Aregger discloses a three-wheeled vehicle with a suspension system. Aregger does not disclose the same suspension system disclosed in claim 7.

Parsons discloses a vehicle suspension system (Col. 1, Lines 54-55), the suspension system comprising: a spindle (Figure 1, Element 18) extending in a longitudinal direction of the vehicle (Col. 2, Lines 27-31) and attached to a body frame (Col. 2, Lines 49-52), the body frame being pivotably attached to the spindle (Col. 2,

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Lines 49-52); right and left suspension arms (Figure 1, Elements 12 and 20) independently coupled to the spindle so that they are capable of pivoting about the spindle (Col. 2, Lines 31-32); right and left rear wheels (Figure 1, Element 4) attached to a right and left side of the body frame (Col. 2, Lines 26-31) via the respective suspension arms (Figure 1, Elements 12 and 20); a swinging mechanism coupled to the body frame (Figure 1, Element 18), the swinging mechanism configured to restrict lateral rotation of the body frame (Col. 2, Lines 64-68) and provided between the suspension arms and the body frame (Figure 1, Element 16). Note, col. 2, lines 66-68 discussing the fact that proper center of mass placement will control roll of the vehicle during cornering.

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the Aregger reference with that of Parsons by modifying the suspension system taught in Aregger to include the features taught in Parsons. The motivation for doing so would have been to create a suspension system which utilizes the advantages taught in Parson's namely better handling and the ability to use a suspension system that can be made useful without the use of an anti-roll bar. Therefore it would have been obvious to combine the three-wheeled vehicle taught in Aregger with the suspension system taught in Parsons.

With respect to claim Claim 9, Parsons further teaches the use of a shock absorber with two ends (Col. 2, Line 75, Col. 3, Lines 1-3) each end of the shock absorber being coupled to a side of one of the suspension arms (Figure 1, Element 25).

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With respect to claim 14, Aregger discloses a three-wheeled vehicle with a suspension system (Figure 1). Aregger does not disclose the same suspension system disclosed in claim 14. Parsons discloses a vehicle suspension system (Col. 1, Lines 54-55), the suspension system comprising: a spindle extending in a longitudinal direction of the vehicle (Col. 2, Lines 27-31) of the vehicle for allowing rotation about an axis defined by the spindle means (Col. 2, Lines 31-32), the spindle means being attached to a body frame (Col. 2, with the body frame being capable of pivoting about the spindle (Col. 2, Lines 57-59); means; right and left suspension means for coupling right and left rear wheels to a right and left side of the body frame (Figure 1, Element 4), the suspension means being pivotably coupled to the spindle (Col. 2, Lines 31-32); and swinging means for restricting lateral swing of the body frame, the swinging means being coupled to the body frame and provided between the suspension means and the body frame (Col. 2, Lines 64-68).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the Aregger reference with that of Parsons by modifying the suspension system taught in Aregger to include the features disclosed in Parsons. The motivation for doing so would have been to create a suspension system which utilizes the advantages taught in Parson's namely better handling and the ability to use a suspension system that can be made useful without the use of an anti-roll bar. Therefore it would have been obvious to combine the three-wheeled vehicle taught in Aregger with the suspension system taught in Parsons.

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5. Claim 8, is rejected under 35 U.S.C. 103(a) as being unpatentable over Aregger (U.S. 6,276,480) and Parsons (U.S. 3,598,385) in view of Petersen (U.S. 5,364,114).

The combination of Aregger and Parsons discloses the suspension system according to claim 7. The combination of Aregger and Parsons does not disclose the suspension system according to claim 7 wherein the suspension arms are A-type arms. Petersen discloses a suspension system utilizing A-type Suspension Arms (Figure 5, Element 35).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the combination of the Aregger and Parsons references with that of Petersen by modifying the combination of Aregger and Parsons to use the A-type suspension arms taught in Petersen. The motivation for using A-type suspension arms would be to improve the structural rigidity of the suspension arms shown in the combination of Aregger and Parsons. Therefore it would have been obvious to combine the combination of Aregger and Parsons with the teaching of Petersen, so as to utilize A-type suspension arms in the suspension system.

RE 6/22/05 Claims 3-6 and 10-13 are objected to as depending from a rejected base claim.
Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art is brought to the applicant's attention.

Valletta (U.S. 2,164,602) is brought to your attention because it discloses a vehicle suspension system, which is designed with both suspension arms linked to a single spring device.

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Rix (U.S. 2,536,769) is brought to your attention because it discloses a spring suspension for motor vehicles.

Lund (U.S. 4,589,678) is brought to your attention because it discloses a suspension for motor vehicles featuring an anti-roll device.


Pellerin (U.S. 5,941,546) is brought to your attention because it discloses a vehicle suspension system featuring a single shock absorber and independent suspension.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Rocca whose telephone number is (571) 272-7721. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J.R.

RUTH LAN
PRIMARY EXAMINER

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